

**REMARKS**

Claims 1-30 are currently pending in the subject application, and are presently under consideration. Claims 14-19 and 21-26 are allowed. Claims 5, 7-10, 12, 13 and 28 have been indicated as allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 1-4, 6, 11, 20, 27, 29 and 30 stand rejected. Claims 2, 6, 7, 9, 12, 13 and 28 have been amended and claims 1, 5, 20 and 27 have been cancelled by this amendment.

Favorable reconsideration of the application is requested in view of the amendments and comments herein.

**I. Rejection of Claims 1-4, 6, 11, 20, 27, 29 and 30 Under 35 U.S.C. §103(a)**

Claims 1-4, 6, 11, 20, 27, 29 and 30 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Publication No. 2002/0063649 A1 to Viswanathan ("Viswanathan"). Withdrawal of this rejection is respectfully requested for at least the following reasons.

The rejection of claims 1, 20 and 27 are moot in view of their cancellation.

Claim 2 has been amended to depend from claim 7, such that dependent claims 3 and 4 now depend indirectly from claim 7. Claim 7 contains allowable subject matter and thus has been amended into independent form, as suggested in the Office Action. Claim 11 has also been amended to depend from amended claim 7. Since amended claim 7 has been indicated as containing allowable subject matter, claim 2 and claim 3 and 4 (depending from claim 7) as well as claim 11 are allowable for at least the same reasons as claim 7 and for the specific subject matter recited in such claims.

Claims 29 and 30 have been amended to depend from amended claim 28. Claim 28 has been indicated as containing allowable subject matter and thus has been amended into independent form, as suggested in the Office Action. Since claims 28 and 30 depend from

allowable claim 28, claims 29 and 30 are allowable for at least the same reasons as claim 28 and for the specific subject matter recited in these respective claims.

Claim 6 has also been amended into independent form to substantially incorporate the subject matter of original claim 1, from which it depended, and to expressly recite that the frequency source provides one of a plurality of stored frequency patterns.

At page 3, the Office Action contends that Viswanathan contains some teaching relating to claim 6. However, the Office Action (unlike other rejected claims) fails to identify any relevant teaching in Viswanathan to support the rejection. Applicant submits that the failure to identify a relevant teaching is due to the absence of any such teaching in the art of record. Accordingly, the Office has failed to present a *prima facie* case of unpatentability, such that claim 6 should be allowed.

Additionally, claim 6 recites that a delta-sigma modulator is coupled to provide the delta-sigma modulated signal to the digital-to-analog converter based on associated processing of the selected one of the frequency patterns. Viswanathan fails to teach or suggest the use of a frequency source to provide a selected one of a plurality of stored frequency patterns and a delta-sigma modulator, as recited in amended claim 6. Instead, similar to as discussed in the Office Action at Page 2 with respect to claim 1, Viswanathan discloses read-only memory 110 that outputs a stored values of a sigma delta sequence when addressed by a 16-bit input signal 106. Paragraph [0031] A plurality of one-bit digital-to-analog converters 122-126 convert different parts of the output sequence to an analog signal. An analog summer sums the analog components to provide a corresponding analog signal. Viswanathan thus does not teach or suggest the use of delta-sigma modulator that processes selected one of a plurality of stored frequency patterns, as recited in claim 6. Since the art of record fails to teach or suggest the structural and functional interrelationships of the digital frequency synthesizer of claim 6, reconsideration and allowance of claim 6 are respectfully requested.

For the reasons described above, claims 2-4, 6, 11, 29 and 30 are patentable over the cited art. Accordingly, withdrawal of this rejection is respectfully requested.

**II. CONCLUSION**

In view of the foregoing remarks, Applicant respectfully submits that the present application is in condition for allowance. Applicant respectfully requests reconsideration of this application and that the application be passed to issue.

If the Examiner has any questions or if the Applicant or its representative can be of any assistance in connection with prosecution of this application, the Examiner is invited and encouraged to contact the undersigned at the number identified below.

Submitted herewith is a check for payment of three additional independent claims. No other fees should be due for this amendment and response; however, please charge any deficiency or credit any overpayment in the fees for this amendment to our Deposit Account No. 20-0090.

Date 23 March 2006

Respectfully submitted,



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